

REMARKS

Claims 1 and 22-50 are currently pending in the above-identified patent application. Claims 22-37 were stated in the Office Action to have been withdrawn from consideration. Claims 38-50 have been added by this amendment. Accordingly, claims 1 and 38-50 remain for consideration; the withdrawal of claims 22-37 from consideration is respectfully traversed.

Claim 1 was rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,242,468 to Barbas et al. ("Barbas et al. '468").

Reexamination of the application as amended, reconsideration of the rejections and withdrawal of claims 22-37 from consideration, and allowance of the claims remaining for consideration are respectfully requested.

The three-month shortened statutory period for response expires on June 9, 2005. Accordingly, this response is being filed in a timely manner.

I. AMENDMENTS TO THE APPLICATION

Entry of the amendments to the claims is respectfully requested. As detailed below, they introduce no new matter.

These amendments are proper for entry after final action under 37 C.F.R. § 1.116. They do not raise new issues, require no new search, and place the claims in better form for consideration on appeal should appeal be required. Therefore, entry of these amendments is proper.

Claim 1 is amended for clarity to recite that the nucleotide-binding activity of the polypeptide resides in the nucleotide-binding region having the sequence of SEQ

ID NO:41. This is clear from Figure 1, which recites the nucleotide-binding activity of SEQ ID NO: 41.

New claims 38-50 are equivalent to claims 22-34, but recite a subset of the sequences originally recited in claims 22-34. This follows a suggestion made in the Office Action of March 9, 2005: "It would have been helpful to Applicants and the Examiner if a few consensus sequences had been provided, each representing specific sequences, to ease the search burden."

Accordingly, entry of these amendments is respectfully requested.

II. THE WITHDRAWAL OF CLAIMS 22-37 FROM CONSIDERATION

The Office Action indicated that claims 22-37 have been withdrawn from consideration. Applicant respectfully traverses this decision and respectfully requests that these claims be considered on the merits.

These claims were withdrawn from consideration because they purportedly contained "110 unrelated sequences." In fact, the sequences are related because of the presence of conservative amino acid substitutions throughout the set of 110 sequences that comprise SEQ ID NOS: 1-110. For example, all of these sequences appear to terminate at their C-terminal end with a basic amino acid, either Lys or Arg. Many have Leu at their fifth amino acid and Val at their sixth amino acid. Thus, it is not proper to consider the subject matter of these claims as directed to "110 unrelated sequences."

Accordingly, the Examiner is respectfully requested to reverse the withdrawal of these claims from consideration and examine them on the merits.

In addition, claims 34-36 specify one sequence each. The scope of these claims is such that they should be examined, as they do not present an “undue burden” on the Examiner.

Applicant, having presented a novel structure-activity relationship for zinc finger proteins, is entitled to consideration of claims of a reasonable scope reflecting the breadth of the invention. This can be accomplished by reversing the withdrawal of claims 22-37 from prosecution and considering them on the merits.

To clarify the scope of the claims and the sequences recited therein, Applicant has introduced new claims 38-50 essentially equivalent to claims 22-34. These claims should also be examined on the merits.

III. THE REJECTION UNDER 35 U.S.C. § 102(e)

Claim 1 was rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,242,468 to Barbas et al. (“Barbas et al. ‘468”).

This rejection is respectfully traversed.

This rejection is traversed on the grounds that the claim recites an isolated and purified zinc finger-nucleotide binding polypeptide that consists essentially of SEQ ID NO:41. The rejection over Figure 15 of Barbas et al. ‘468 is over a polypeptide that contains other nucleotide binding regions than SEQ ID NO: 41, so that this rejection does not take into account the effect of the preamble “consists essentially of.”

The preamble “consisting essentially of” or equivalent language limits the scope of a claim to the specified materials or steps “and those that do not materially affect the basic and novel characteristics of the claimed invention.” In re Herz, 190 U.S.P.Q. 461, 463 (C.C.P.A. 1976).

The use of this transitional phrase, therefore, precludes the possibility of a rejection under 35 U.S.C. § 102(e) over Barbas et al. '468. The rejection over Figure 15 of Barbas et al. '468 is over a polypeptide that contains a framework that affects the ability of the protein to bind the required nucleotide sequences. It is a well-understood principle of protein structure that the secondary and tertiary structure of a protein is directly specified by the primary structure of the protein. The ability of an amino acid sequence to act as a zinc finger motif and bind a specified triplet is therefore highly dependent on the secondary and tertiary structure of the protein. The zinc finger proteins of Barbas et al. '468, including that of Figure 15, are provided by minimal modification of the wild-type zinc finger proteins Zif268.

In contrast, the zinc finger polypeptides of the present invention are derived by modular assembly and are not directly related to Zif268 in their primary sequence. This means that the secondary and tertiary structures of the proteins differ significantly.

The application of this principle of protein chemistry meets the burden of showing that the introduction of additional components would materially change the characteristics of applicant's invention. In re De Lajarte, 143 U.S.P.Q. 256 (C.C.P.A. 1964).

Therefore, the Examiner is respectfully requested to withdraw this rejection.

IV. CONCLUSION

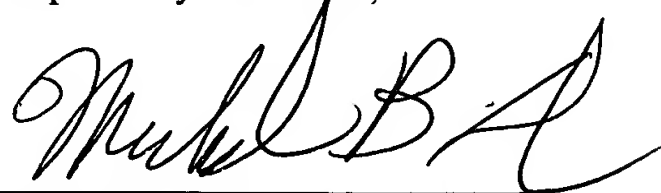
In conclusion, claims 22-37 should be examined on the merits together with new claims 38-50.

All claims for consideration are patentable over the prior art of record, whether considered individually or in combination. Accordingly, prompt allowance of these claims is respectfully requested.

If any issues remain, the Examiner is respectfully requested to telephone the undersigned at (858) 450-0099 x302.

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Respectfully submitted,


Michael B. Farber, Ph.D., Esq.

CATALYST LAW GROUP, APC
4220 La Jolla Village Drive, Suite 220
San Diego, California 92122
(858) 450-0099
(858) 450-9834 (Fax)